

**REMARKS**

The Pending Claims

Claims 1-48 are pending and under active consideration. The claims describe a waveguide for detecting light scattering particles, a method for detecting an analyte using light scattering particles and an apparatus that comprises the waveguide, an illuminating system and a scattered light detection system.

The Office Action

Claims 1-48 are rejected.

Claims 1-21, and 23-40 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yguerabide et al. (U.S. Patent No. 6,214,560).

Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yguerabide et al.

Amendments

No claims have been canceled, added or amended.

### **Response to Rejections**

#### **35 U.S.C. 102(b) Rejection**

Claims 1-21, and 23-40 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yuguerabide et al. (U.S. Patent No. 6,214,560). Applicants respectfully traverse this rejection.

The present claims are drawn to a waveguide comprising a first optically transmissive material that forms an interface with a second optically transmissive material, wherein the refractive index of said second material is greater than or equal to the refractive index of said first material, and one or more populations of scattered light detectable particles of a dimension between about 1 and about 500 nm inclusive that are bound to an analyte, wherein said particles are distributed in said second material such that said particles are illuminated by non-evanescent light and produce detectable scattered light in said waveguide.

Yuguerabide is cited for the following description:

In other assay applications, the particles which are bound to a solid substrate such as a bead, surface such as the bottom of a well, or the like can be released into solution by adjusting the pH, ionic strength, or other liquid property. Higher reactive index liquids can be added, and the particle light scattering properties are measured in solution. Similarly, particles in solution can be concentrated by various means into a small volume or area prior to measuring the light scattering properties. Again higher refractive index liquids can be added prior to the measurement. Column 23 lines 22-32.

The Office Action asserts that this embodiment is describing the situation “wherein said particles are distributed in said second [higher refractive index] material...” Page 2. Yuguerabide states explicitly in the above cited paragraph that “the particles... can be released into solution... Higher reflective index liquids can [then] be added... Similarly particles in solution can be concentrated... Again higher refractive index liquids can [then] be added prior to the measurement.” If Yuguerabide wanted the particles distributed in the higher reflective index liquid it is unclear why he releases/concentrates them in the lower refractive index solution. The Office Action’s conclusion appears contrary to the description in Yuguerabide. Further explanation or withdrawal of the rejection is respectfully requested.

Since Yuguerabide does not teach or suggest all of the elements of the claimed invention, it is not anticipatory under 35 U.S.C. § 102(b). Withdrawal of all rejections over Stimpson et al. under 35 U.S.C. § 102(b) is respectfully requested.

35 U.S.C. § 103(a) Rejection

Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yuguerabide *et al.* Applicants respectfully traverse this rejection.

As mentioned above, Yuguerabide fails to teach all of the claim limitations, which is required to establish a *prima facie* case of obviousness. Notably, there is no description of the particles being distributed in the higher refractive index media as required by the claims. Accordingly, Applicants respectfully submit that the obviousness rejection over Yuguerabide is improper and should be withdrawn.

**CONCLUSION**

Applicants appreciate the Examiner's thorough review of this application and in view of the above remarks respectfully submit that the application is now ready for allowance. Early notice to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution, the Examiner is invited to call the undersigned agent at (541) 335-0165.

Respectfully submitted,

Date: June 8, 2007

/Joel Silver/  
Joel Silver  
Reg. No. 53,866

Invitrogen Corporation  
29851 Willow Creek Rd.  
Eugene, Oregon, 97402  
Phone: (541) 335-0165  
Facsimile: (541) 335-0354

CUSTOMER NO. 23358